

In re Application of
David A. Tirrell
Application No.: 10/015,956
Filed: December 10, 2001
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PATENT
Attorney Docket No.: CIT1530-1

REMARKS

The following is a response to the Office Action mailed August 12, 2005. Claims 1 and 5 have been amended. Claims 6-7, 9-11, 14-16, 19-44, 46-48 and 51-55 have been cancelled without prejudice or disclaimer. New claim 57 has been added. Claims 8, 12-13, 45 and 49-50 were previously cancelled. Upon entry of the amendment, claims 1-5, 17-18, 56 and 57 will be pending.

Further a substitute Sequence Listing and Verification thereof is attached herein. This Sequence Listing is supported in the specification and claims as originally filed, thus it does not add new matter. This Sequence Listing will replace all prior Sequence Listings. Also, upon acknowledgement from the Office that the substituted Sequence Listing provided herein is sufficient and corresponds to the disclosed formula, Applicants will amend the specification as necessary in the next response.

I. Amendment to the claims

Claims 6-7, 9-11, 14-16, 19-44, 46-48 and 51-55 have been cancelled without prejudice or disclaimer. Claims 8, 12-13, 45 and 49-50 were previously cancelled and Claims 1 and 5 have been amended and claim 57 has been amended.

Claim 1 has been amended to recite:

A fusion protein comprising:

- (a) a subject protein; and
- (b) a polyanionic domain attached to the subject protein at a terminal region, wherein the polyanionic domain binds to a polycationic coating deposited on a solid support and the polyanionic domain has the formula $-[-(\text{SEQ ID NO:1})_x-\text{SEQ ID NO:2}-]_n$, wherein x is 5, 6, 7 or 8 and n is an integer between about 1 and 4, or $-[-(\text{SEQ ID NO:1})_y-\text{SEQ ID NO:6}-]_m$, wherein y is 0, 1, 2, 3, 4, 5, 6, 7 or 8 and m is an integer between about 1 and 40, and wherein SEQ ID NO:1 is Ala-Gly, SEQ ID NO:2 is Pro-Glu-Gly and SEQ ID NO:6 is Glu-Gly.

Also, for purposes of clarity, the “x” and “n” of SEQ ID NO:2 has been changed to “y” and “m”. This amendment does not add new matter because it merely reassigned the same numerical units described in the specification and claims as filed to a different letter.

Claims 1 and 57 have support in the specification (paragraph [0015]) and claims as filed (claims 6 and 7). Thus, amendments to the claims do not add new matter.

II. Rejection under 35 U.S.C. § 112, second paragraph (indefiniteness)

Claims 1-7, 9-11, 14-18 and 56 are rejected under 35 U.S.C. § 112, second paragraph as being allegedly indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant traverses this rejection as it may apply to the amended claims.

According to the Office Action, the structural formula as disclosed in the specification (see paragraphs [0016] and [0048]) and claims (see claim 1) do not correlate or correspond with the Sequence Listing as filed on June 8, 2005. Applicant submits herewith a substituted Sequence Listing correlates with the structural formulas as described in the specification and the claims. Support for the substituted sequence listing is provided in the specification (e.g., [0016], [0048] and [0071]) and claims as filed (claims 1, 22, 26, 39 and 40).

Also, according to the Office Action, claims 1-7 are indefinite because the “x” and “n” are not defined. Claim 1 has been amended such that the metes and bounds of “x” or “y” and “n” or “m” are defined. Further, claims 17-18 further describe the metes and bounds of “x” and “n”.

Also, according to the Office Action, claims 1-3 are indefinite because of the phrase “terminal region”. It is submitted, that the phrase “terminal region” is not indefinite. The phrase is standard in the art, and refers to the N-terminal (amino terminal) or C-terminal (carboxy terminal) region of a polypeptide. Further, the phrase is described in the specification in paragraph [0017]:

....As used herein, “terminal region” refers to a continuous amino acid sequence of about 30 amino acids, one of which is a terminal amino acid. The terminal amino acid can be the amino acid at the amino-terminal, and the terminal region is the amino-terminal region, and the terminal amino acid can be the carboxyl terminal region, and the terminal region is the carboxyl-terminal region. In certain embodiments, the polyanionic domain is attached to the subject protein at the terminal amino acid.

Thus, the phrase “terminal region” in claim 1 is not indefinite. Similarly, claims 2 and 3 which further describe the metes and bounds of the “terminal region” are also not indefinite.

The Office Action also states that claims 6-7 are allegedly indefinite because the phrase “aspartic acid” has no antecedent basis. Claims 6 and 7 have been cancelled, thus making the rejection as to claims 6 and 7 moot. Further, claim 5 has been amended to include the subject matter of claims 6 and 7. Support for claim 5 is provided throughout the specification and claims as filed, for example, paragraph [0015] and original claims 6 and 7.

Therefore, amendments to the claims are supported in the specification and claims as filed and no new matter has been added.

III. Rejection under 35 U.S.C. § 102

Claims 1, 9-11 and 14-16 are rejected under 35 U.S.C. § 102(b) as being anticipated by Petka et al. (hereinafter, “Petka”) and Ferrari et al. (hereinafter, “Ferrari”). Although page 4 of the Office Action states “Detka et al.”, Applicant respectfully traverses this rejection as it relates to U.S. Patent No. 6,090,911 to Petka et al. as noted in PTO-892 form, which was attached to the Office Action mailed August 12, 2005. Also, claims 9-11 and 14-16 have been cancelled, thus the rejection is moot as it relates to those claims. Therefore, the rejection is respectfully traversed as it relates to the amended claim 1 and new claim 57.

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To anticipate, a single reference must inherently or expressly teach each and every element of claimed invention. *In re Spada*, 15 USPQ2d 1655 (Fed Cir. 1990); and *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). MPEP § 2131.

According to the Office Action, Petka discloses SEQ ID NO:23 (claim 6) which is allegedly identical to the amino acid sequence of claim 1 of the instant invention, where x is 3-4 and n is 16, 18, 28 and 36 (page 4 of the Office Action).

Petka discloses 6 “[a] block copolymer of claim 3, wherein Y has the sequence $[(\text{AlaGly})_p\text{-ProGluGly}]_n$ (SEQ ID NO: 23), where p is 0 to 4 and n is 5 to 100” (claim 6). However, Petka does not anticipate the claimed invention because Petka does not disclose “ - [- $(\text{Ala-Gly})_x\text{-Pro-Glu-Gly-}]_n$ or $-[-(\text{SEQ ID NO:1})_x\text{-SEQ ID NO:2-}]_n$, wherein x is 4, 5, 6, 7 or 8 and n is an integer 1 to 4 (see claim 1). Hence, Petka cannot anticipate the claimed invention because Petka does not disclose each and every element of the claimed invention.

Also, according to the Office Action, Ferrari discloses SEQ ID NO:48 which is allegedly identical to the $-[-(\text{Ala-Gly})_y\text{-Glu-Gly-}]_m$ or $-[-(\text{SEQ ID NO:1})_y\text{-SEQ ID NO:6-}]_m$ of claim 1 of the instant invention (page 4 of the Office Action). Ferrari discloses a polypeptide sequence $-[-(\text{MDPVVLQRRDWQNPGVTQLNRLAAHPPFASDPMG})\text{-}(\text{AGSGAG})_n\text{-}]$. The sequence of the claimed invention, $-[-(\text{Ala-Gly})_y\text{-Glu-Gly-}]_m$ or $-[-(\text{SEQ ID NO:1})_y\text{-SEQ ID NO:6-}]_m$, is not that described in Ferrari.

Accordingly, withdrawal of rejection of pending claims 1 and 57 under 35 U.S.C. § 102, is respectfully requested.

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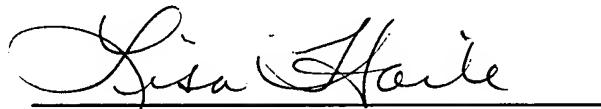
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Conclusion

In view of the amendments and above remarks, it is submitted that the claims are in condition for allowance, and a notice to that effect is respectfully requested. The Examiner is invited to contact Applicant's undersigned representative if there are any questions relating to this application.

Applicants do not believe any other fees are due in connection with this submission, however if any other fees are due, please charge any fees, or make any credits, to Deposit Account No. 07-1896.

Respectfully submitted,



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Date: November 2, 2005

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